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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,129	02/02/2006	Tsunco Maruyama	09852/0203468-US0	9359
7278	7590	01/09/2008		
DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770			EXAMINER. ZHU, WEIPING	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/554,129	Applicant(s) MARUYAMA ET AL.	
	Examiner Weiping Zhu	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Status of Claims

1. Claims 1-4 are currently under examination, wherein the claims 1 and 2 have been amended in applicant's amendment filed on November 13, 2007.

Status of Previous Rejections

2. The previous rejections of claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over JP 2002-180162 as stated in the Office action dated July 13, 2007 have been withdrawn in light of applicant's amendment filed on November 13, 2007.

The new grounds of rejections have been established as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP ('162) in view of Dautzenberg et al. (US 5,628,046).

With respect to claims 1-4, JP ('162) discloses a wear resistant bearing for motor fuel pump comprising a Cu-based sintered body of compacted powders having a composition in weight of 1-8% graphite, 0.1-0.9% P and 20-40% Ni and having a porosity of 5-25% (abstract). The content ranges of graphite, P and Ni in the Cu-based sintered body of JP ('162) overlap the claimed respective content ranges (1-5% graphite, 0.1-0.9% P and 17.6-25.2% Ni) and the porosity of the Cu-based sintered

body of JP ('162) also overlaps the claimed porosity. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed ranges within the disclosed ranges of JP ('162) with expected success, because JP ('162) discloses the same utility over the entire disclosed ranges.

JP ('162) further discloses that Cu-Ni alloy powder containing different percentages of Ni, Cu-P alloy powder containing 33% of P and graphite powder were blended to make green compacts (paragraph [0010], translation). JP ('162) does not specify the content of Ni in the Cu-Ni alloy powder, the content of Cu-P alloy in the powder mixture as claimed and the P content in the Cu-P alloy powder disclosed in the embodiment of JP ('162) is higher than the claimed content in the instant claims 1 and 2. However, it is well held that discovering an optimum value of a result-effective variable involves only routine skill in the art. In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980). In the instant case, the content of Ni in the Cu-Ni alloy, the content of Cu-P alloy in the powder mixture and the content of P in the Cu-P alloy are result-effective variables, because they would directly affect the final contents of Ni and P in the Cu-based sintered body of JP ('162), which would in turn directly affect the corrosion resistance and abrasion resistance respectively of the Cu-based sintered body of JP ('162) as disclosed by JP ('162) (paragraphs [0006 and [0007], translation). Therefore it would have been obvious to one skilled in the art to have optimized the content of Ni in the Cu-Ni alloy and the content of P in the Cu-P alloy in the Cu-based sintered body of

JP ('162) in order to achieve desired corrosion and abrasion resistances of the Cu-based sintered ring body. See MPEP 2144.05 II.

JP ('162) further discloses that the blended base powders are press-formed into a green compact and the green compact is sintered into a sintered body (paragraph [0010], translation). JP ('162) does not disclose that the sintered body is sized within the range of 400 to 500 MPa as claimed in the instant claims 1 and 2. Dautzenberg et al. ('046) discloses sizing sintered articles for smoothing the roughness without specifying the pressure range (col. 4, lines 12-15). However, as discussed in the paragraph above, the pressure is also a result-effective variable, because it would directly affect the smoothness of the surface as disclosed by Dautzenberg et al. ('046) (col. 4, lines 12-15). Therefore, it would have been obvious to one skilled in the art to have optimized the pressure of the sizing of Dautzenberg et al. ('046) in order to achieve desired smoothness of the surface. See MPEP 2144.05 II. It would have been obvious to one of ordinary skill in the art at the time the invention was made to size the sintered body of JP ('162) as disclosed by Dautzenberg et al. ('046) in order to improve surface quality and dimensional stability of the sintered body of JP ('162) as disclosed by Dautzenberg et al. ('046) (col. 4, lines 12-15).

JP ('162) further discloses a process for making the wear resistant bearing which is substantially identical to the process as disclosed in the instant disclosure (paragraph [0010], translation).

JP ('162) does not specify the structure features of the Cu-based sintered body as claimed in the instant claim 4. However, it has been well held where the claimed and

prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), MPEP 2112.01 [R-3] I. In the instant case, the claimed and JP ('162)'s wear resistant bearings are identical or substantially identical in composition and are produced by identical or substantially identical processes, therefore a prima facie case of obviousness exists. The same distributions of pores, P components and free graphite would be expected in the Cu-based sintered body of JP ('162) as in the claimed Cu-based sintered body.

Response to Arguments

4. The applicant's arguments filed on November 13, 2007 have been fully considered but they are moot in view of new grounds of the rejections.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

12/26/2007


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